



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/683,929	10/09/2003	John W. Rapp	1934-13-3	2222
7590	06/29/2006			EXAMINER HUISMAN, DAVID J
Bryan A. Santarelli GRAYBEAL JACKSON HALEY LLP Suite 350 155 - 108th Avenue NE Bellevue, WA 98004-5901			ART UNIT 2183	PAPER NUMBER

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/683,929	RAPP ET AL.	
Examiner	Art Unit		
David J. Huisman	2183		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 October 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-65 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) _____ is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) 1-65 are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-16 and 41-50, drawn to a pipeline circuit for receiving, loading, retrieving, processing, and providing data, classified in class 712, subclass 34.
 - II. Claims 17-21 and 51-52, drawn to an input data handler for determining whether data is directed to a pipeline based on message analysis, and providing the data if it is directed to the pipeline, classified in class 712, subclass 208.
 - III. Claims 22-24 and 53-54, drawn to an output data handler for determining a destination based on data type and providing data to the destination, classified in class 712, subclass 200.
 - IV. Claims 25-30 and 55-58, drawn to a sequence manager to control operation of a pipeline, classified in class 712, subclass 214.
 - V. Claims 31-34 and 59, drawn to a configuration manager that sets an operating configuration, classified in class 712, subclass 15.
 - VI. Claims 35-40 and 60, drawn to an exception manager to identify an exception in the operation status of a pipeline, classified in class 712, subclass 244.
 - VII. Claims 61-65, drawn to a method for designing a pipeline circuit by combining data representations of components, where at least one representation is retrieved from a library, classified in class 716, subclass 1.

The inventions are distinct, each from the other because of the following reasons:

2. All inventions except for group VII are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case:

- a) subcombination I has separate utility such as acting as a network processor in which data is received from source, processed, and then sent to a destination.
- b) subcombination II has separate utility such as acting as an instruction decode/issue unit in which an instruction is analyzed, and based on the instruction format, routing it to an appropriate pipeline.
- c) subcombination III has separate utility such as acting as a parallel processor which executes multiple threads and performs thread-switching to mask latencies and which shares data among threads.
- d) subcombination IV has separate utility such as controlling the operation of any pipeline in any system. It could be a stall device, which tells the pipeline when to stall.
- e) subcombination V has separate utility such as configuring a pipeline in any system. It could be a device used to program an FPGA.
- f) subcombination VI has separate utility such as detecting mathematical errors in any processing system. The exception manager may be used to detect a divide-by-zero instruction, which would cause an error.

3. Inventions VII and any of inventions I, II, III, IV, V, and VI are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different

product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, group VII is a method for designing a pipeline while the other groups claim some variation of the pipeline itself. However, the components claimed in groups I-VI do not need to be designed in such a fashion. Designing the components of groups I-VI could simply include drawing the general structure on a sheet of paper.

4. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

See MPEP § 806.05(d) and 806.05(e).

Restriction Practice

5. Section 812.01 of the Manual of Patent Examining Procedure (MPEP) states the Examiner does not have to telephone the attorney or agent in cases where the Restriction is deemed complex. The Restriction is deemed complex by the Examiner and the attorney/agent should be afforded the benefit of receiving the action for careful review and time to formulate a response.

6. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and

specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Huisman whose telephone number is (571) 272-4168. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (571) 272-4162. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJH
David J. Huisman
June 22, 2006



RICHARD L. ELLIS
PRIMARY EXAMINER